BALRANALD MINERAL SANDS PROJECT

Noise Management Plan

January 2023

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Abbreviations

Abbreviation	Full Title
AWS	Automatic Weather Station
Consent	Development Consent SSD-5285
dB(A)	Decibel
DCCEW	Department of Climate Change, Energy the Environment and Water
DPE	Department of Planning and Environment
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
EMS	Environmental Management Strategy
EPA	NSW Environment Protection Authority
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
HMC	Heavy mineral concentrate
HSEC	Health, Safety, Environment and Community
Iluka	Iluka Resources Limited
ISO	International Standard Organisation
LCC	Lost Control Card
LOM	Life of Mine
MOD1	Development Consent Modification 1
NATA	National Association of Testing Authorities
NMP	Noise Management Plan
NPI	NSW Noise Policy for Industry
NSW	New South Wales
PAX	Potassium amyl xanthate
PIRMP	Pollution Incident Response Management Plan
PSNL	Project specific noise level
RMP	Radiation Management Plan
VLAMP	Voluntary Land Acquisition and Mitigation Policy
WA	Western Australia
WCP	Wet concentrator plant
WHIMS	Wet high intensity magnetic separator

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1. Introduction

1.1. Purpose and scope

This Noise Management Plan (NMP) has been prepared by Iluka Resources Limited (Iluka) to satisfy the requirements of Schedule 3, Condition 5 of NSW Development Consent (SSD-5285). This NMP has been prepared using the Departments *Guideline for the preparation of Environmental Management Plans* (DIPNR 2004) and the management plan requirements in Schedule 5, Condition 3 of NSW Development Consent (SSD-5285).

The NMP is applicable to all activities for the underground mining trial at the Balranald west mine including construction, operations, decommissioning, rehabilitation and other works consistent with the NSW Development Consent (SSD-5285). The NMP does not cover exploration activities outside the approved Project boundary or mining leases.

Should Iluka undertake construction of the open cut mining at West Balranald or at the Nepean deposit, a revised NMP will be prepared prior to commencement of construction to include management measures and monitoring relevant to the site for approval by DPE, in accordance with Schedule 2, Condition 17 of Development Consent (SSD-5285).

The conditions of consent to which the NMP relates to and where they are addressed in the NMP is presented in Table 2.

1.2. Objectives

The NMP has been prepared to assist those undertaking activities on the site to apply appropriate management measures to minimise the impacts of Project related noise and to ensure that noise generated by the development does not cause exceedances of the criteria specified in Schedule 3, Condition 3 of Development Consent (SSD-5285).

1.3. Environmental Policy

The Iluka HSEC policy is publicly available at https://www.iluka.com/ and provides a declaration of the importance Iluka places on conducting its business safely, without detrimental health effects and with regard to the community and the value of the natural environment.

2. Project description

2.1. Project overview

Iluka have approval to develop a mineral sands mine in south-western New South Wales (NSW), known as the Balranald Mineral Sands Project (the Balranald Project). It includes construction, open-cut mining, primary processing, and rehabilitation of two linear mineral sand deposits, known as the West Balranald and Nepean deposits, located approximately 12 kilometres (km) and 66 km north-west of the town of Balranald, respectively. The Balranald Project also included undertaking an approved bulk sampling activity at the West Balranald deposit with the removal of up to 100,000 tonnes (t) of mineral ore to trial the use of underground mining methods.

Development consent (SSD-5285) was granted for the Balranald Project by a delegate of the NSW Minister for Planning under the EP&A Act on 5 April 2016 (herein referred to as the consent). Approval was also granted under the EPBC Act (EPBC 2012/6509) by a delegate of the Commonwealth Minister for the Environment on 6 January 2017 (herein referred to as the Commonwealth approval).

Iluka has undertaken some of the approved bulk sampling activity involving the extraction of the mineral ore from depth using trial underground mining within the approved disturbance area of the West Balranald deposit.

The outcome of the bulk sampling activity confirmed the effectiveness of the underground mining method, validated key elements of the mining unit design and have been used to help guide future life-of-mine (LOM) operational conditions and inform the potential suitability (commerciality and potential reduced environmental impacts) of underground mining as an alternative method for resource extraction.

On 21 December 2022, Iluka were granted approval to modify the consent (MOD1) to expand the underground mining trial which includes an additional area of disturbance to the approved Balranald Project area to enable primary processing of the ore into heavy mineral concentrate (HMC) and transport of HMC offsite for secondary processing at Iluka's facilities in Victoria and/or Western Australia (WA).

Iluka intend to construct and operate the underground mining trial for up to six years as approved, at the completion of the underground mining trial Iluka would either seek a life of mine approval for underground mining, cease operations and rehabilitate or develop the open cut mining method to extract the remainder of the ore deposit.

2.2. Site location plan

The regional setting and conceptual site layouts for the Balranald Project is presented in Figure 1 to Figure 3 respectively.

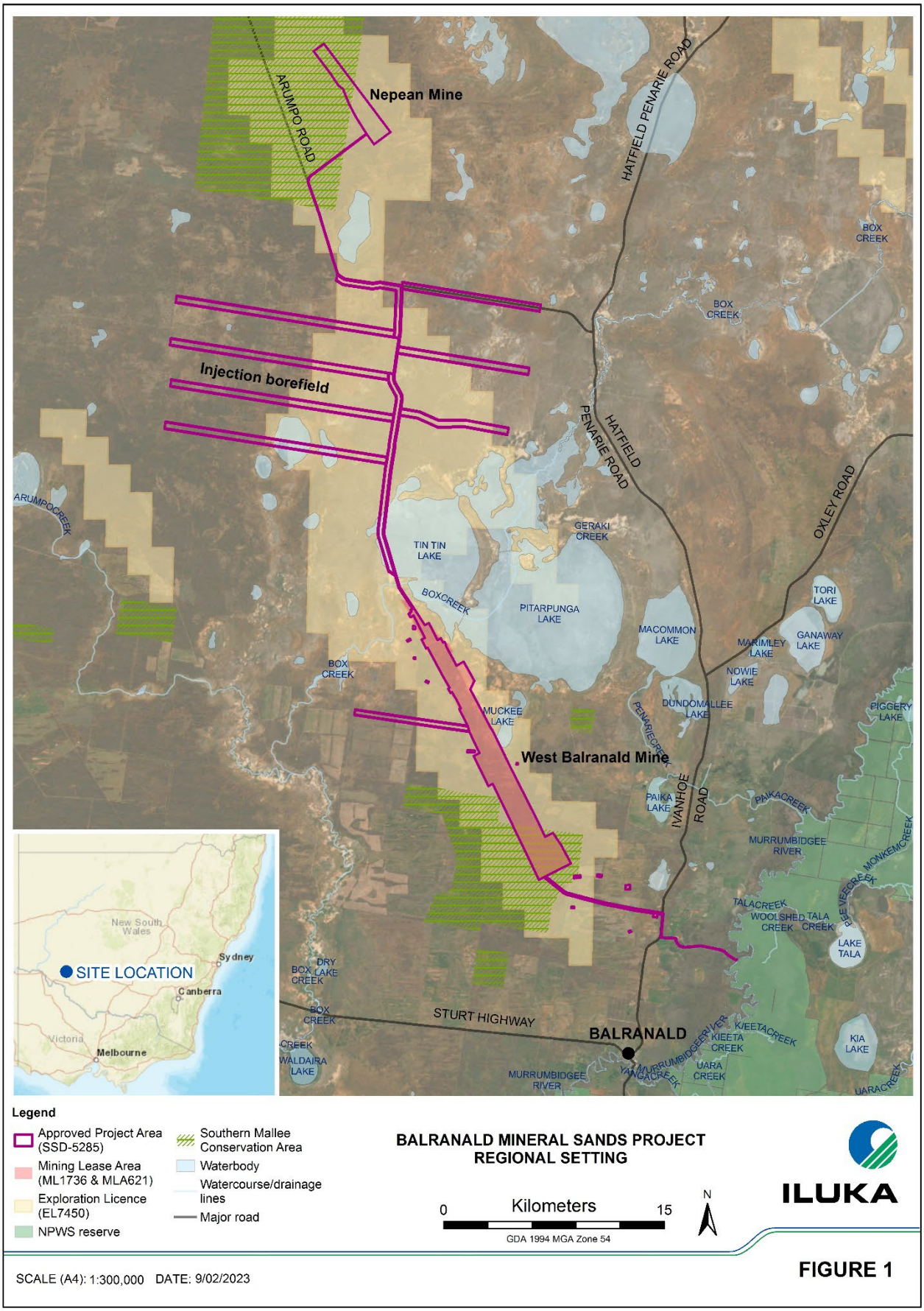

Figure 1- Regional setting

Figure 2- Underground mining general arrangement

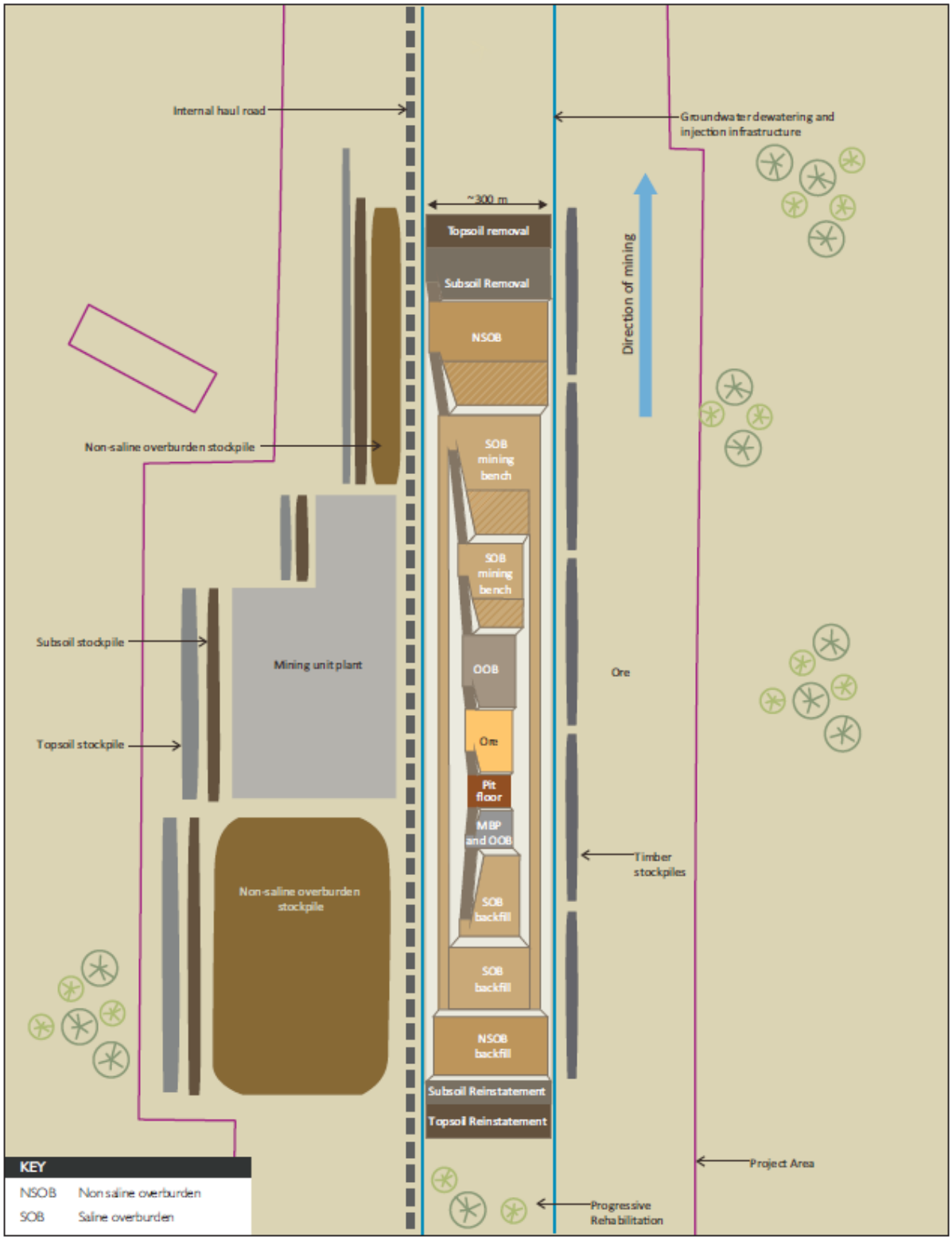

Figure 3- Opencut mining general arrangement

2.3. Scope of works

All works will be carried out in accordance with Iluka's EMS and NMP (Section 4) to manage noise associated with the construction and operation of the Balranald west mine underground mining trial. An indicative list of plant and equipment that will be used in the construction and operation of the mine is:

- surface mobile equipment (SME)e.g. dozers, graders, scrapers, tractor scoops, , excavators, haul trucks, rollers, water trucks and loaders;
- lifting equipment (cranes, telehandlers and forklifts);
- mining plant (, drill rigs, groundwater bores and lighting plants); and
- processing plant (wet concentrator plant, floatation plant, WHIMS plant, conveyors, pumps and stackers).

2.3.1. Construction

Construction of the underground mining trial involves the initial vegetation clearing and soil stripping within the approved Balranald Project footprint, with the following infrastructure proposed to be located within this area:

- processing plant infrastructure, comprising WCP, flotation plant and WHIMS plant;
- product and tails pad(s);
- process water, potassium amyl xanthate (PAX) and fines dams;
- underground mining infrastructure;
- temporary stockpiles (topsoil, subsoil and overburden);
- timber stockpiles (felled vegetation);
- hardstand and laydown areas;
- site offices, warehousing, workshops, amenities and carparking;
- services and utilities infrastructure;
- fuel storage and dispensing area;
- telecommunications tower;
- mine access road and accommodation camp; and
- internal access tracks and roadways.

Additional construction works would be undertaken should the open cut mining method be developed.

2.3.2. Operations

2.3.2.1. Underground mining method

The underground mining method will extract mineral ore via a process of pumping slurried ore to the surface.

The predicted processing rate is anticipated to be between 50 and 200 tph, consistent with the previous bulk sampling activity.

The processing plant has a number of components including the screening plant, WCP, flotation plant and WHIMS plant.

The ore is concentrated through the processing plant to generate two primary product streams, magnetic HMC and non-magnetic HMC.

HMC will be stockpiled on site and transported to an off-site location for processing.

Tailings generated at the processing plant will include fine clay (slimes) and courser sand tails. The coarse sand tailings will be placed on surface directly above the panels ahead of mining. The topsoil and subsoil will be pre-stripped from these areas prior to the emplacement of the coarse sand tails and then returned for rehabilitation.

The majority of the fine sand slimes and a portion of the finer sand tails resulting from the flotation process will be reinjected underground. The mining process is depicted in Figure 5.

2.3.2.2. Open cut mining method

Open cut mining operations would involve a sequenced dry-mining method using trucks and shovels and associated equipment fleets.

Dewatering of groundwater from aquifers overlying and surrounding the ore body would be required ahead of mining operations. Groundwater extracted prior to mining will be injected into the Loxton-Parilla Sands Formation via a network of re-injection bores.

Ore would be processed through a mining unit plant (MUP) before being processed through the wet concentrator plant (WCP) to produce HMC and Ilmenite.

Tailings and by-products from mineral processing would be progressively backfilled in the mining void and capped with overburden material.

Overburden emplacement would include stockpiling outside of the mining pit and direct backfilling of the mining void.

The opencut general arrangement is shown in Figure 3.

2.4. Timing of activities

The Balranald west mine includes a construction period of approximately 18 months followed by an operational phase of approximately six years to extend underground mining trials. Year 1 of the operational phase overlaps with the completion of the construction phase by approximately four months. The site will operate 24 hours per day, seven days per week during construction, mining, processing and transport activities. The indicative planned sequencing of activities is presented in Figure 4.

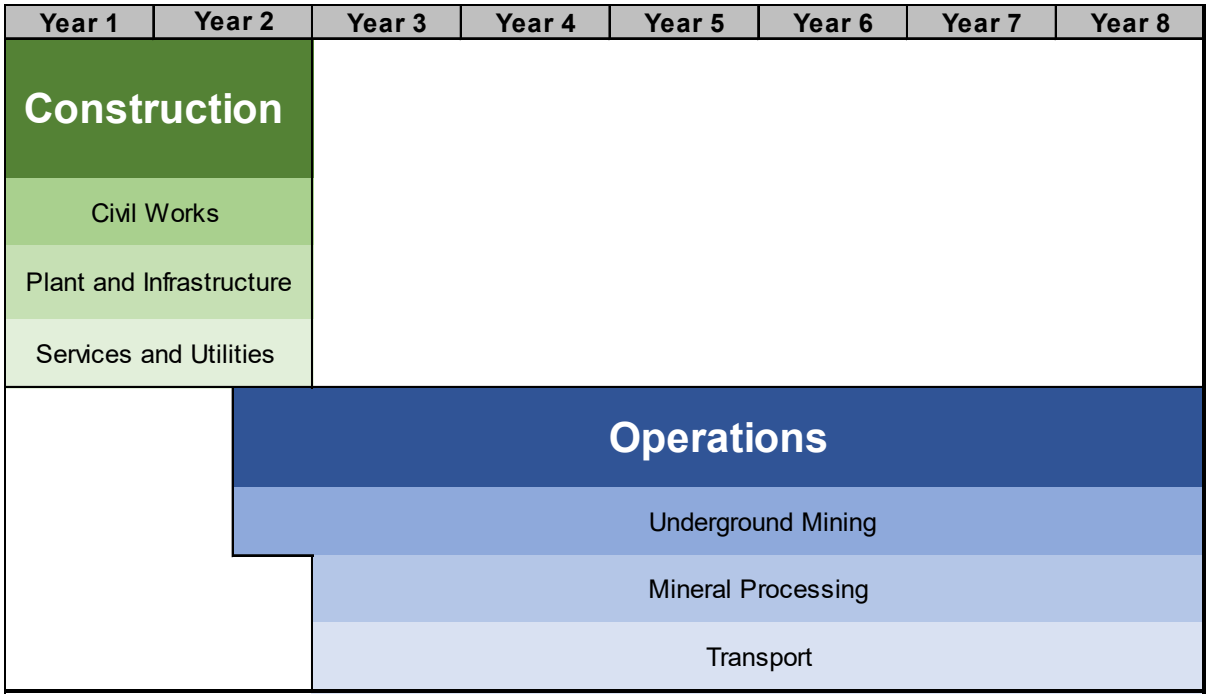

Figure 4- Sequence of site activities

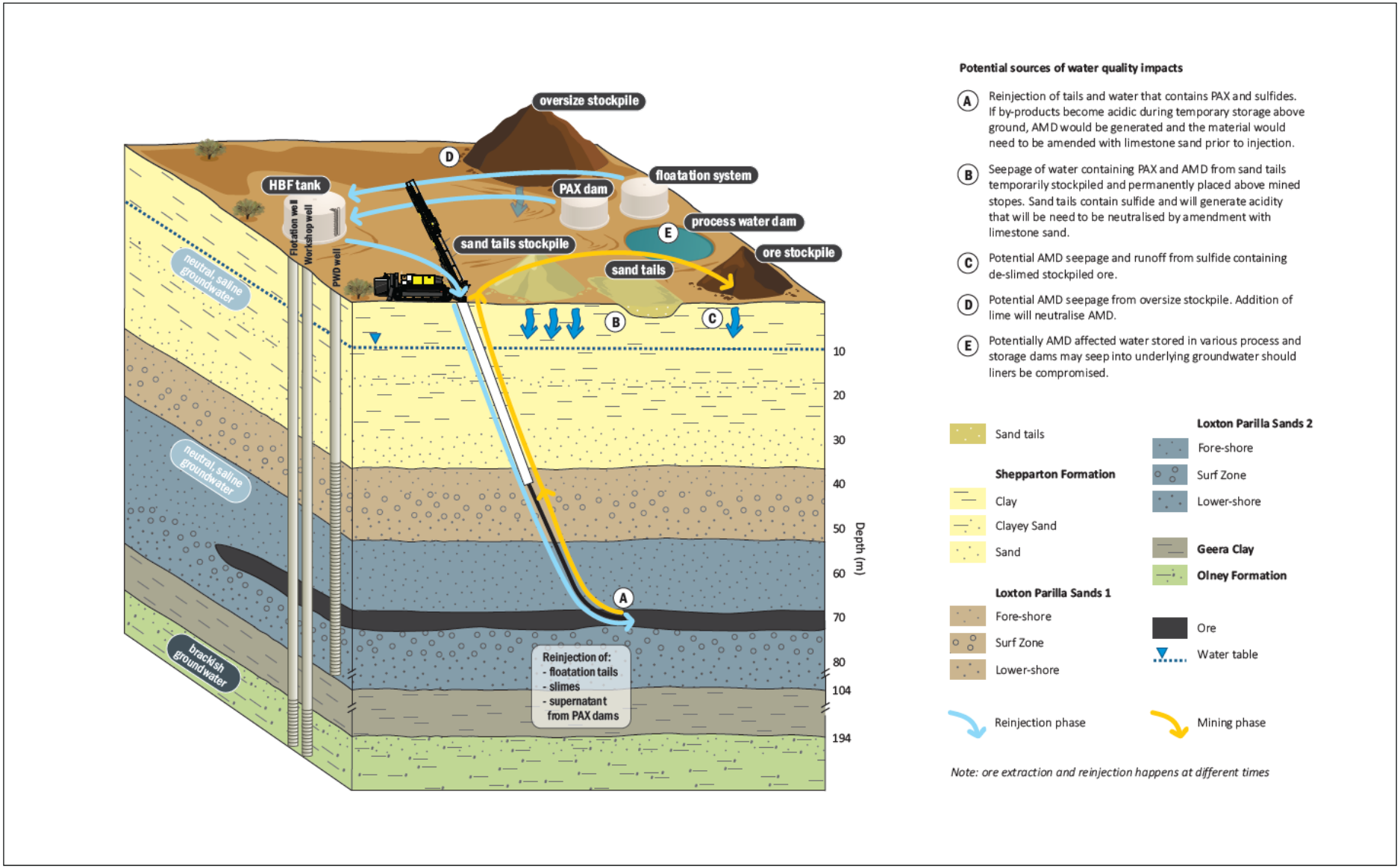

Figure 5- Mining process

3. Community and stakeholder engagement

3.1. Consultation for the preparation of the NMP

Iluka has prepared the NMP in consultation with the EPA as required by Schedule 3, Condition 5(a) of Development Consent (SSD-5285). Details of the consultation process are provided in (Appendix A).

3.2. Communication

In accordance with Schedule 5, Condition 10 of NSW Development Consent (SSD-5285), the Iluka website will be maintained as a tool for the provision of information to stakeholders and interested parties about the environmental and community performance of the Project .

Information available on the Iluka website will kept up to date to the satisfaction of the Secretary of the DPE.

Stakeholder engagement is also managed in accordance with Iluka's Social Management Plan. Iluka's HSEC Social Performance Standard requires activities to be conducted in such a way that social risks to the business and social impacts on communities are:

- identified;
- assessed;
- controlled; and
- reviewed.

External stakeholder interactions are recorded in Iluka's Isometrix database to ensure a record of stakeholder interactions is maintained for the life of the Project .

3.3. Complaints

Iluka will maintain an enquiries and community complaints hotline for the Balranald Project (Phone 1800 305 993 or email balranald.community@iluka.com). The community hotline will be publicly advertised on the Iluka website Balranald engagement hub.

Community complaints will be managed in accordance with Iluka's Social Management Plan and Social Performance standard *(Group Standard 02 – Social Performance)*.

Iluka's Social Management Plan for the Balranald operation provides additional requirements regarding stakeholder engagement and consultation.

In the event a complaint or inquiry is made by an external party the nominated Iluka employee (dependent on the nature of the complaint) will be directed on the course of action in consultation with the Senior Manager.

A record of the event will be entered into the HSEC electronic management system. Any actions arising from the event will be tracked to ensure the event is dealt with appropriately.

Community inquires and complaints will be recorded. The following information will be captured:

- the date and time ;
- the method by which the complaint or inquiry was made;

- any personal details of the complainant if provided;
- the nature of the complaint or inquiry;
- the action taken by Iluka in relation to the complaint or inquiry, including any follow-up contact with the proponent; and
- if no action was taken by Iluka, the reasons why no action was taken.

The record will be kept for at least 4 years.

The Social Management Plan includes a grievance resolution process to enable Iluka to respond appropriately and respectfully to any issues raised by stakeholders (including internal stakeholders). The grievance resolution process is summarised in Figure 6.

A complaints and inquiry register is available on the Iluka community engagement hub website https://www.iluka.com/engage/balranald and kept up to date on a monthly basis.

3.4. Dispute resolution

In the event of a disagreement between Iluka and a member of the community, the nominated Iluka employee (dependent on the nature of the complaint) will be directed on the course of action in consultation with the Senior Manager. Iluka will undertake the liaison to reach a resolution. Should resolution of the dispute not be reached through this primary process, either party may refer the matter to the Secretary of the DPE for resolution.

A flow diagram summarising the dispute resolution process is presented in Figure 6.

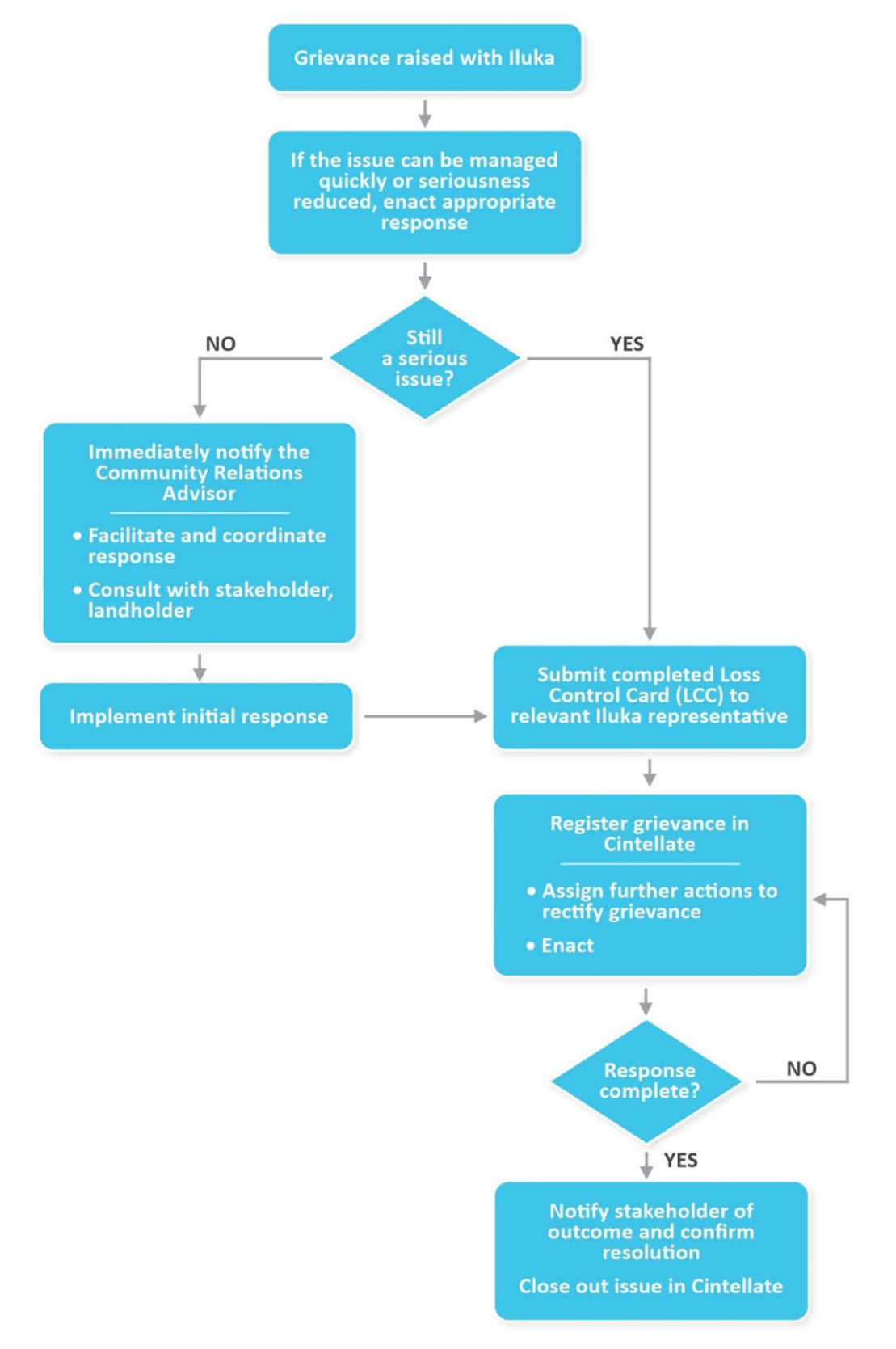

Figure 6- Summary of grievance resolution process

4. Environmental management framework

4.1. Relationship to existing EMS

Iluka's EMS has been developed to fulfil the relevant conditions in the NSW Development Consent (SSD-5285 and Commonwealth Approval (EPBC Act 2012/6509) by providing a strategic framework for environmental management of the Project including all environmental management plans (EMPs), strategies and programs prepared for the Project . The EMS establishes the overarching framework for the monitoring and environmental management of activities undertaken for the Project . The EMS incorporates the principals of continuous improvement and is consistent with the five pillars of International Standard Organisation (ISO) 14001: Environmental Management Systems. This NMP is a subordinate of Iluka's EMS.

4.2. Environmental management structure and responsibilities

All persons undertaking activities on the site are responsible for environmental management and are accountable for the following:

- complying with relevant legislation;
- complying with the EMS;
- communicating any information they become aware of in relation to environmental management; and
- taking actions to prevent and mitigate environmental impacts.

All employees and contractors within Iluka are held accountable for promoting and displaying behaviours consistent with the Iluka Plan. Table 1 defines HSEC and EMS related accountabilities.

Table 1- Roles and responsibilities for Environment and Community management

Role	Accountabilities
Operations Manager	• Ensure business plans align with wider sustainability objectives and targets. • Promote a culture of accountability and risk awareness, ensuring corrective and preventive actions are completed. • Promote active participation in Environment & Community matters in general. • Provide effective resources to implement the management system within the operation / function. • Ensure overall compliance to the EMS & HSECMS within the operation / function.
Environment, Rehabilitation and Community Relations (ERCR) Superintendent	• Provide advice/support to the operation for achievement of ongoing environmental compliance. • Inform, investigate and provide advice for environmental issues, non-compliances and incidents to the Operations Manager. • Support the preparation of environmental reports in compliance with corporate and regulatory requirements.

Role	Accountabilities
	• Review and oversee the implementation of the EMS, EMPs and procedures in accordance with corporate and regulatory requirements. • Ensure regular review environmental risk assessments with operational team members and other stakeholders as required. • Oversee rehabilitation planning and implementation. • Respond to and report on community complaints in consultation with the Operations Manager. • Conduct internal compliance audits of applicable regulatory approvals, licences and other legislation for the project. • Liaise with government regulators and other stakeholders on environment and community matters. • Develop procedures required for effective environmental management of the operation.
Environmental Specialist	• Manage the environmental monitoring database. • Collate data and prepare written reports for environmental and community performance reporting. • Implement and review the EMS, EMPs and procedures in accordance with corporate and regulatory requirements • Assist and provide advice to the Environmental Technician in collection of environmental monitoring data. Inform the creation of procedures required for effective environmental management of the operation. • Conduct site environmental inspections and audits to identify issues and report findings to the ERCR Superintendent. • Assist in achieving compliance with regulatory requirements related to environmental management as required by the ERCR Superintendent. • Participate in the review and development of environmental risk assessments. • Conduct internal compliance audits of applicable regulatory approvals, licences and other legislation for the project and advise the ERCR Superintendent of any non-compliances. • Manage site waste removal and treatment requirements
Environmental Technician	• Conduct the environmental monitoring required by the approved EMPs for the project. • Follow procedures for environmental monitoring accurately and consistently. • Collect and record raw data accurately and consistently for all compliance monitoring. • Maintain calibration records of all equipment and ensure within manufacturers specifications. • Conduct site environmental inspections and report issues identified to ERCR Superintendent. • Assist with on ground environmental improvement works.
Rehabilitation Specialist	• Coordinate the planning and implementation of the rehabilitation in accordance with the Rehabilitation Management Plan and applicable procedures.

Role	Accountabilities
	• Coordinate the rehabilitation monitoring programs including engagement of specialised consultants. • Ensure that rehabilitation resources are managed effectively to ensure the success of the rehabilitation. • Prepare rehabilitation related documents and maintain the spatial data base • Liaise with government regulators and other stakeholders on all rehabilitation matters.
Site Employees and Contractors	• Understand and comply with the Iluka EMS, HSEC policy and supporting standards • Accept accountability to ensure personal safety and the health and safety of others, and protect the environment • Identify, assess and control risks prior to undertaking any activity • Actively challenge or refuse to work in unsafe conditions or where unacceptable impact to the environment or community may occur • Intervene to prevent incidents • Actively participate in HSEC meetings, initiatives, risk assessments and monitoring programs • Report all incidents and near hits immediately • Correct or isolate hazardous situations in the workplace • Understand and follow the local emergency procedures • Comply with and suggest improvements to site documentation, processes and procedures

4.3. Legal and compliance requirements

The relevant legal and compliance requirements as well as policies, standards and guidelines and where they are referenced in this NMP are provided in Table 2.

Table 2- Legal and compliance requirements relevant to the NMP

<table>
<tr><th>NSW Development Consent (SSD-5285)</th><th>NMP Section</th></tr>
<tr><td>Sc.3(C.1) Upon receiving a written request for acquisition from an owner of the land listed in Table 1, the Applicant must acquire the land in accordance with the procedures in conditions 3 and 4 of Schedule 4.
Table 1: Land subject to acquisition upon request
<table>
<tr><th>Acquisition Basis</th><th>Property</th></tr>
<tr><td>Noise</td><td>R5</td></tr>
</table>
</td><td>Section 4.6.2</td></tr>
</table>

<table>
<tr><td>Sc.3(C.2) Upon receiving a written request from an owner of the land listed in Table 1 (unless the landowner has requested acquisition), the Applicant must implement additional noise mitigation measures (such as double glazing, insulation and/or air conditioning) at the residence in consultation with the landowner. These measures must be reasonable and feasible, and directed towards reducing the noise impacts of the development on the residence commensurate with the level of impact in accordance with the Voluntary Land Acquisition and Mitigation Policy (November 2014).
If within 3 months of receiving this request from the owner, the Applicant and the owner cannot agree on the measures to be implemented, or if there is a dispute about the implementation of these measures, then either party may refer the matter to the Secretary for resolution.</td><td>Section 4.6.2</td></tr>
<tr><td>Sc.3(C.3) Except for the noise-affected land in Table 1, the Applicant must ensure that the noise generated by the development does not exceed the noise criteria in Table 2.
Table 2: Noise criteria dB(A)
<table>
<tr><th rowspan="2">Location</th><th>Day</th><th>Evening</th><th colspan="2">Night</th></tr>
<tr><th>$L_{Aeq(15min)}$</th><th>$L_{Aeq(15min)}$</th><th>$L_{Aeq(15min)}$</th><th>$L_{A1(1min)}$</th></tr>
<tr><td>Any residence on privately-owned land</td><td>35</td><td>35</td><td>35</td><td>45</td></tr>
<tr><td>Mungo National Park and Mungo State Conservation Area (when in use)</td><td>50</td><td>50</td><td>50</td><td>-</td></tr>
</table>
Noise generated by the development must be monitored and measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the NSW Noise Policy for Industry (EPA, 2017).
However, these noise criteria do not apply if the Applicant has an agreement with the owner/s or leaseholders of the residence to generate higher noise levels, and the Applicant has advised the Department in writing of the terms of this agreement.</td><td>Section 4.7</td></tr>
<tr><td>Sc.3(C.4) The Applicant must:
(a) implement all reasonable and feasible measures to minimise the construction, operational and road noise of the development;
(b) minimise the noise impacts of the development during meteorological conditions; and
(c) undertake regular attended monitoring of the noise of the development, to ensure compliance with the relevant conditions of this consent.</td><td>Section 4.6 & Table 3
Section 4.6 & Table 3
Section 4.7</td></tr>
<tr><td>Sc.3(C.5) The Applicant must prepare a Noise Management Plan for the development to the satisfaction of the Secretary. This plan must:
(a) be prepared in consultation with the EPA;
(b) describe the measures that would be implemented to ensure compliance with the noise criteria and operating conditions of this consent;
(c) include a noise monitoring program for evaluating and reporting on:
○ compliance against the noise criteria in this consent; and
○ compliance against the noise operating conditions; and
(d) defines what constitutes a noise incident, and includes a protocol for identifying and notifying the Department and relevant stakeholders of any noise incidents.</td><td>This NMP
Section 3.1
Section 4.6
Section 4.7
Section 4.15</td></tr>
<tr><td>Sc.4(C.1) Within 1 month of the commencement of development under this consent, the Applicant must notify in writing the owners of the land listed in Table 1 of Schedule 3 that they have the right to require the Applicant to:
(a) acquire their land in accordance with the procedures in conditions 3 and 4 below at any stage during the development; and
(b) implement additional noise mitigation measures at their residence at any stage during the development.

Table 1
<table>
<tr><th>Acquisition Basis</th><th>Property</th></tr>
<tr><td>Noise</td><td>R5</td></tr>
</table></td><td>Section 4.6.2</td></tr>
<tr><td>Sc.3(C.10) During the life of the development, the Applicant must ensure that there is a suitable meteorological station operating in the vicinity of the site that complies with the requirements in the Approved Methods for Sampling of Air Pollutants in New South Wales guideline.</td><td>Section 4.7.3</td></tr>
</table>

<table>
<tr><td>Sc.5 (C.3) The Applicant must ensure that the management plans required under this consent are prepared in accordance with any relevant guidelines, and include:
(a) detailed baseline data;</td><td>Section 4.7.1</td></tr>
<tr><td>(b) a description of:
• the relevant statutory requirements (including any relevant approval, licence or lease conditions);
• any relevant limits or performance measures/criteria;
• the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;</td><td>Section 4.3

Table 2
Section 4.8</td></tr>
<tr><td>(c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;</td><td>Section 4.6</td></tr>
<tr><td>(d) a program to monitor and report on the:
• impacts and environmental performance of the development;
• effectiveness of any management measures (see c above);</td><td>Section 4.7
Section 4.11</td></tr>
<tr><td>(e) a contingency plan to manage any unpredicted impacts and their consequences;</td><td>Section 4.15.2</td></tr>
<tr><td>(f) a program to investigate and implement ways to improve the environmental performance of the development over time;</td><td>Section 4.15.4</td></tr>
<tr><td>(g) a protocol for managing and reporting any:
• incidents;
• complaints;
• non-compliances with statutory requirements; and
• exceedances of the impact assessment criteria and/or performance criteria; and</td><td>Section 4.14.1
Section 3.3
Section 4.10.1
Section 4.10.1</td></tr>
<tr><td>(h) a protocol for periodic review of the plan.</td><td>Section 4.16</td></tr>
<tr><td colspan="2">NSW EPA Environment Protection Licence 20795</td></tr>
<tr><td>(L3.1) Noise from the premises must not exceed the limits specified in the following table:
<table>
<tr><th>Location</th><th>Day [dB(A) LAeq 15 minute]</th><th>Evening [dB(A) LAeq 15 minute]</th><th>Night [dB(A) LAeq 15 minute]</th><th>Night [dB(A) LA1 1 minute]</th></tr>
<tr><td>All dwellings on privately-owned land not assigned acquisition or mitigation rights</td><td>35</td><td>35</td><td>35</td><td>45</td></tr>
<tr><td>Any National Park or Conservation Area</td><td>50</td><td>50</td><td>50</td><td></td></tr>
</table></td><td>Section 4.6.1</td></tr>
<tr><td>(L3.2) The noise emission limits identified in this licence apply under all meteorological conditions except:
a) during rain and wind speeds (at 10m height) greater than 3m/s; and
b) under "non-significant weather conditions".</td><td>Section 4.6.1</td></tr>
<tr><td>(M1.1) The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.</td><td>Section 4.7.2</td></tr>
<tr><td>(M1.2) All records required to be kept by this licence must be:
a) in a legible form, or in a form that can readily be reduced to a legible form;
b) kept for at least 4 years after the monitoring or event to which they relate took place; and
c) produced in a legible form to any authorised officer of the EPA who asks to see them.</td><td>Section 4.7.2</td></tr>
<tr><td>(M1.3) The following records must be kept in respect of any samples required to be collected for the purposes of this licence:
a) the date(s) on which the sample was taken;
b) the time(s) at which the sample was collected;
c) the point at which the sample was taken; and
d) the name of the person who collected the sample.</td><td>Section 4.7.2</td></tr>
<tr><td colspan="2">Policies, Standards and Guidelines</td></tr>
<tr><td>Noise Policy for Industry (EPA, 2017)</td><td>Section 4.7</td></tr>
<tr><td>Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (EPA, 2022)</td><td>Section 4.7.3</td></tr>
<tr><td>AS 1055:2018 Acoustics- Description and Measurement of Environmental Noise</td><td>Section 4.7.2</td></tr>
<tr><td>Voluntary Land Acquisition and Mitigation Policy (NSW Government, 2014)</td><td>Section 4.6.2</td></tr>
</table>

Iluka Health, Safety, Environment and Community Policy	Section 1.3
AS/NZS IEC 61672.1 Electroacoustics- Sound level meters	Section 4.7.2
Iluka Standard 2: Social Performance	Section 3.3
Iluka Standard 3: Training and Awareness	Section 4.4
Iluka Environmental Management Strategy	Section 4.1

4.4. Training and awareness

Iluka have a standard for training and awareness *(Group Standard 3:Training and Awareness)* to ensure employees and contractors are appropriately trained and are competent to perform their work.

Inductions (excluding visitor induction) shall be undertaken every two years or more frequently as required. The Iluka induction and a Project specific induction shall be undertaken prior to commencement of works.

Processes and procedures are developed and implemented by the operation to identify, prioritise and plan the fulfilment of training needs commensurate with HSEC risks. Processes shall include (at a minimum):

- development of a training needs analysis, including the identification of training needs for all employees and contractors within the area, operations, Project or function;
- delivery of training and maintaining currency;
- methods and criteria for the determination of competency; considering training, education, skills and experience; and
- evaluation of the effectiveness of training processes and programs.

Training attendance, inductions and competency shall be recorded. Employee and contractor records shall be maintained and attendance recorded in the Iluka Training Management System.

Iluka maintain a training platform , which requires employees to undertake specific training programs periodically.

4.5. Environmental risk assessment

A risk assessment has been undertaken to quantify environmental and community risk. Mitigation measures have been identified to minimise impacts to be as low as reasonably practicable during all the phases (e.g. construction, operations, decommissioning and rehabilitation) of the Project. The risk assessment will be reviewed regularly throughout different stages of the Project. A copy of the noise risk assessment has been included in Appendix B.

4.6. Environmental management measures

4.6.1. Compliance with noise criteria

Noise management at the Project will involve a combination of proactive and reactive management strategies. These measures will be supported by attended noise monitoring at locations on privately owned land to demonstrate compliance with noise criteria specified in Table 2.

The noise criteria in Table 2 apply under all meteorological conditions except the following:

- wind speeds greater than 3 m/s at 10 metres above ground level; or
- stability category F temperature inversion conditions and wind speeds greater than 2 m/s at 10 m above ground level; or
- temperature inversion conditions greater than 8ºC/100m.

Mungo National Park is located some 65km north of the west Balranald mine site and some 26km north of the Nepean deposit. The Balranald Mineral Sands Noise Assessment (EMM, 2015) did not identify any predicated noise impacts to Mungo National Park, therefore it is not proposed that any compliance monitoring will be undertaken to assess compliance with criteria for Mungo National Park as specified in Table 2.

The management measures and controls that will be implemented to minimise Project noise generation and disturbances to the community are outlined in Table 3.

4.6.2. Additional mitigation measures for receiver R5

In accordance with Schedule 4, Condition 1 of development consent (SSD_5285), Iluka shall notify in writing the owner(s) of the land listed in Table 1 of Schedule 3 (i.e. R5 – Karra Homestead) of their right to request the implementation of additional noise mitigation measures and/or acquisition of their land in accordance with the procedures outlined in Condition 3 and Condition 4 of Schedule 4.

The 2015 noise assessment provided noise predictions for the approved Balranald Project for three representative years of mining operations (year 1, year 4, and year 8), selected to assess the potential noise impacts of worst-case operations. The main activities assessed included soil stripping and handling, overburden handling, open-cut ore mining and handling, product processing and hauling materials.

The noise assessment showed that during adverse weather conditions (ie noise-enhancing) for all assessment periods and all stages of the mine life, operational noise levels from the Balranald Project were predicted to satisfy the relevant noise criteria at most assessment locations. The exception was at one assessment location (R5 – Karra Homestead) where noise levels were predicted to result in significant impacts with Iluka seeking to acquire this privately-owned property.

The Balranald Mineral Sands Noise Assessment (EMM,2015) showed that location (R5) is predicated to experience noise levels above the INP Project specific noise level (PSNL) of 35 dB(A). This location is predicated to experience noise levels greater than 40 dB(A). Assessment locations where noise levels are predicated to be more than 5 dB above PSNL are entitled to voluntary acquisition upon request in accordance with the VLAMP (EMM,2015). Iluka commenced the acquisition of the Karra property in 2022 with the sale agreement due to settle prior to the commencement of construction of the West Balranald Mine, the existing dwelling was destroyed by fire in 2020 and is no longer habitable. At no time during active mining operations will residence be permitted to reside in any buildings at the R5 location.

Table 3- Noise management measures and controls

No.	Noise management measures	Phase	Timing/frequency	Location	Responsibility	Source/reference	Evidence/documentation
N1	Consultation with the relevant landowners prior to and during construction/operations.	Construction/Operational	Prior and during construction	Privately owned land	Environmental/Community advisor	Noise Impact Assessment (MOD1)	Consultation records
N2	Construction noise monitoring in the early stages of construction.	Construction	Quarterly during first 12 months of construction	Sensitive receiver location (R5)	Environmental	Noise Impact Assessment (MOD1)	Monitoring report
N3	Compliance noise monitoring.	Operational	Quarterly during the first 12 months of operations	Sensitive receiver location (R5)	Environmental	Noise Impact Assessment (MOD1)	Monitoring report
N4	A review of noise management measures to ensure noise levels during construction remain below the noise management levels.	Construction	Monthly	Project approval area	Environmental	Noise Impact Assessment (MOD1)	Inspection report
N5	Complaints management, including recording, reporting and acting on noise complaints.	Construction/Operational	As required	Community	Environmental/Community advisor	Noise Impact Assessment (MOD1)	Complaints register/Lost Control Card/Cintellate
N6	Maintaining all plant and equipment in good working order to ensure sound outputs are within manufacturer specifications.	Construction/Operational	At all times	Project approval area	Equipment Maintainers	Noise Impact Assessment (MOD1)	Plant and equipment maintenance records/pre-start inspections

No.	Noise management measures	Phase	Timing/frequency	Location	Responsibility	Source/reference	Evidence/documentation
N7	Road transport protocol for drivers that includes measures to reduce noise impacts to community.	Operations	Prior to transport of HMC offsite	Community	Transport Manager	Development Consent (SSD-5285)	Approved Road Transport Protocol/Driver training records
N8	Staggering heavy vehicle departure times. (Where possible)	Operations	During HMC transport	Community	Transport Manager	Risk Assessment	Traffic Management Plan/Transport records
N9	Fans, pumps and motors located within buildings or enclosures (Where possible).	Operations	At all times	Processing areas	Operations Manager	Risk Assessment	Engineer designs/Inspection reports
N10	Transport limit of 700,000 tonnes combined total of HMC and Ilmenite in any calendar year.	Operations	Annually	Offsite transport	Transport Manager	Development Consent (SSD-5285)	Transport records
N11	Acquisition of R5-Karra Homestead to mitigate noise impacts to any residence at this receiver location during adverse weather conditions (i.e. noise enhancing). No persons to reside in any building at R5 during active mining operations.	Pre-commencement	Once off	R5- Karra Station	Lands Manager	Development Consent (SSD-5285)	Sale Agreement/Western Lands Lease

4.7. Noise monitoring program

The noise monitoring program will comprise attended noise monitoring representative of the privately owned receivers most likely to be affected by noise generated by Project construction, mining operations and transport. Irrespective of land ownership these locations will be used to assess compliance with noise criteria specified in Table 2.

Noise monitoring will be undertaken in accordance with the relevant requirements for reviewing performance set out in the NSW *Noise Policy for Industry* (NPI) (EPA, 2017).

Meteorological monitoring will be conducted at Iluka's Automatic Weather Station (AWS) which complies with the requirements in the *Approved Methods for Sampling of Air Pollutants in New South Wales* (NSW EPA, 2022) guideline.

4.7.1. Baseline data

The Balranald Mineral Sands Noise Assessment (EMM, 2015) assessed the existing ambient noise environment of the Project area by conducting noise monitoring. Ambient noise levels at all three locations were dominated by natural noise sources such as birds and insects with little traffic noise. There was no existing industrial noise contribution at any of the monitoring locations at the time of monitoring. Figure 7 shows where baseline noise assessments were conducted.

Table 4- Baseline noise monitoring data

Monitoring location	Period	Rating background level (RBL)	Measured existing LAeq noise level	Existing LAeq industrial contribution
A	Day	<30	41	nil
	Evening	<30	37	nil
	Night	<30	40	nil
B	Day	31	46	nil
	Evening	<30	44	nil
	Night	<30	38	nil
C	Day	<30	43	nil
	Evening	<30	40	nil
	Night	<30	36	nil

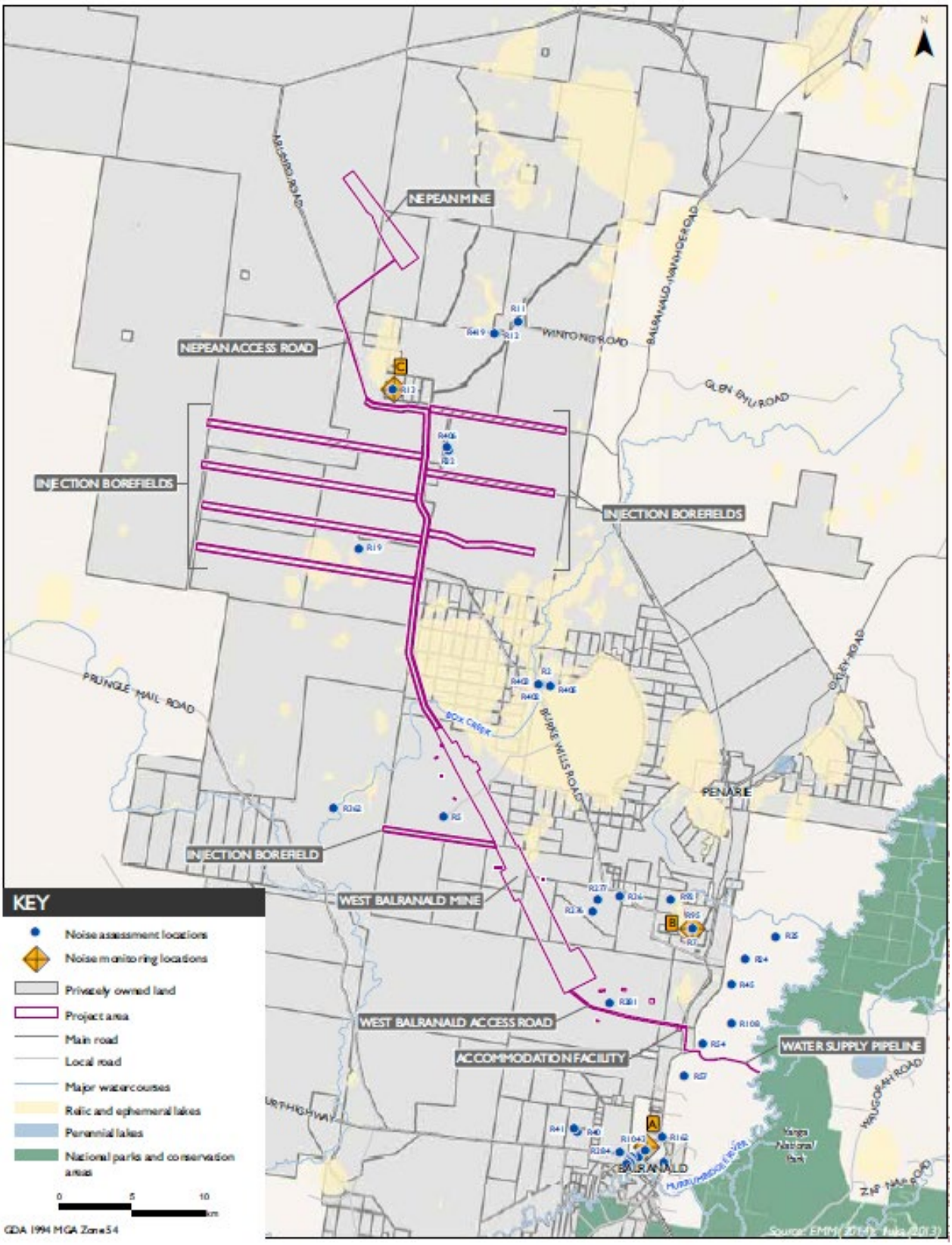

Figure 7- Baseline noise assessment locations

4.7.2. Attended noise monitoring

An overview of the noise monitoring program is provided in Table 5. Figure 8 below shows the location of noise monitoring locations and sensitive receiver locations relevant to the Project area.

Table 5- Noise monitoring program

Site ID	Location	Frequency/Assessment period	Units of measure
BN1	Adjacent Balranald-Ivanhoe Rd (R54 & R57)	Quarterly during construction and quarterly during operations (first 12 months) *Day/Evening/Night	LAeq(15min)
BN2	Burke and Wills Rd (R2)		
BN3	Cringadale/Karra boundary (R362)		

** Assessment period is defined as: day (7am to 6pm); evening (6pm to 10pm); or night (10pm to 7am)*

Attended noise monitoring at the sites will occur on a quarterly basis (i.e. at least 4 times in each calendar year) and in accordance with AS 1055:2018 *Acoustics- Description and Measurement of Environmental Noise* and the NPI (EPA, 2017).

Noise monitoring will be conducted by trained and competent personnel or consultants.

In accordance with Appendix 5, Condition 3 of Development Consent (SSD-5285), the results of the attended noise monitoring will be used to evaluate compliance with noise criteria specified in Table 2.

Monitoring will be conducted quarterly during construction and for the first 12 months after the commencement of operations. If monitoring indicates compliance with noise criteria in Table 2, then Iluka would seek approval to revise the NMP to either reduce the frequency, change the method of noise monitoring or only conduct attended noise monitoring in response to a noise incident or complaint from the community.

The results of the noise monitoring will be imported into Iluka's database and will be published on the Iluka website in accordance with Schedule 5, Condition 10 of Development Consent (SSD-5285) and a summary of all monitoring results will reported annually in the Annual Review (Section 4.11.2).

Acoustic instrumentation used in attended monitoring will comply with AS/NZS IEC 61672.1 *Electroacoustics- Sound level meters* and carry current NATA or manufacturer calibration certificates. Instrument calibration will be conducted before and after each survey, with the variation in calibrated levels not to exceed ± 0.5 dB(A). The intrusive noise level (LAeq[15min]) contribution from Project construction and operational activities will be quantified over a 15 minute measurement period. In addition, the overall levels of ambient noise (i.e. LAmax, LA1, LA10, LA90, LAmin and LAeq) over the 15 minute period will be quantified and characterised. Modifying factors from the NPI (EPA, 2017) will be used where applicable.

Noise monitoring results will be kept in a legible form for at least four years from the date of the monitoring results being obtained. The results obtained from any monitoring will be made available to an authorised officer if requested.

The following records will be kept in respect of any samples required to be collected for noise monitoring:

- the date(s) on which the sample was taken;
- the time(s) at which the sample was collected;
- the point at which the sample was taken;
- the name of the person who collected the sample;
- recording intervals;
- meteorological conditions for each measurement location;
- noise level descriptors and notes identifying principal noise sources;
- Project activities occurring at the time of monitoring; and
- instrument calibration details.

4.7.3. Meteorological monitoring

Meteorological monitoring is undertaken at Iluka's AWS in accordance with Schedule 3, Condition 10 of Development Consent (SSD-5285). Meteorological monitoring complies with the requirements in the *Approved Methods for Sampling and Analysis of Air Pollutants in New South Wales* guideline (NSW EPA, 2022) and AS/NZS 3580.14:2014- *Methods for sampling and analysis of ambient air Meteorological monitoring for ambient air quality monitoring applications.*

The following data is collected by the weather station:

- rainfall;
- humidity;
- solar radiation;
- continuous wind speed and direction; and
- temperature statistics (e.g. average, maximum and minimum).

4.8. Environmental Inspections

Environmental inspections will be carried out to identify environmental hazards and to assess the effectiveness of noise management measures and controls.

Table 6 outlines the inspection program that will be implemented during the construction and operation of the Project .

Inspections will be documented in the form of a checklist and any hazards or non-conformances will be reported using Iluka's inspection management system. Any actions arising from the inspections will be

allocated as soon as reasonably practical and tracked using the Iluka inspection management system until closed out.

Table 6- Noise inspection program

Inspection area	Details of inspection	Timing/frequency	Responsibility
Earthworks	• Equipment is maintained and being operated correctly. • Equipment operating within approved areas.	Monthly	Earthworks Supervisor/ Environmental
Processing	• Plant and equipment being maintained and operated correctly.	Monthly	Shift Supervisor/ Environmental
Transport	• Haul trucks maintained and no noisy or loose parts. • Drivers trained and adhering to Road Transport Protocol and Traffic Management Plan.	Monthly	Transport Manager/ Environmental
Community	• Compliance monitoring being conducted and assessed against noise criteria limits. • Community complaints register maintained and any actions closed out. • Results of noise monitoring reported and published on Iluka website.	Quarterly/Monthly	Environmental

4.9. Environmental control maps and plans

Figure 8 below shows the location of noise monitoring locations, weather station and sensitive receiver locations relevant to the Balranald west Project area.

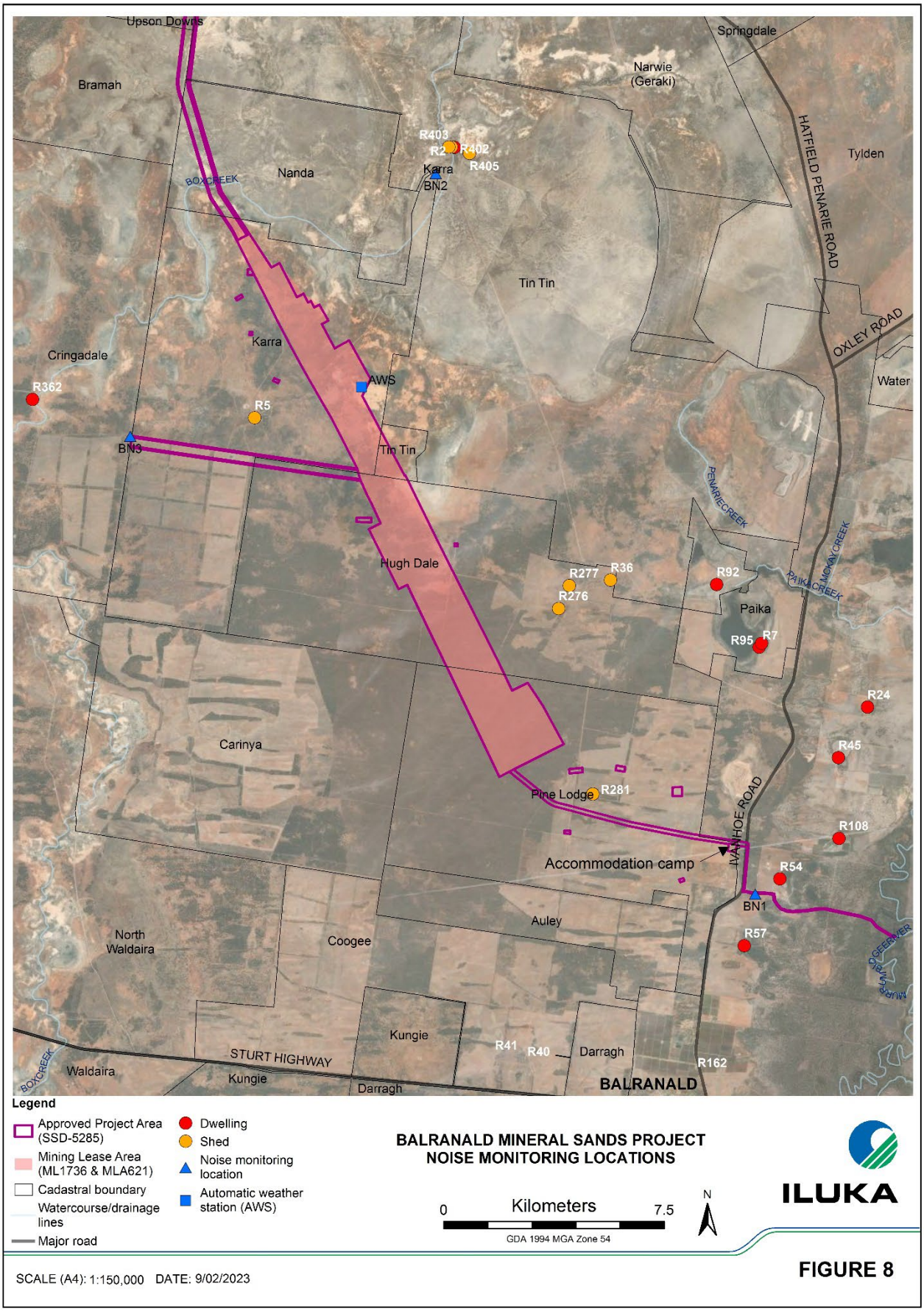

Figure 8- Noise monitoring locations

4.10. Compliance monitoring and reporting

4.10.1. Compliance monitoring

Compliance for the Project is to be achieved by:

- adherence to conditions of the Development Consent, EPA Licence, Mining Lease conditions and corporate policies;
- annual compliance reporting in the Annual Review;
- review of the EMPs within 3 months of an Annual Review, a reportable incident, an Independent Environmental Audit or modifications to the conditions of the Consent;
- regular compliance auditing (both internal and external)
- revision of risk assessments periodically or after a reportable incident or a new hazard is identified;
- identification of performance against criteria and/or performance measures; and
- implementation of corrective measures to rectify a non-compliance or performance issue.

Compliance with all approvals, plans and procedures will be the responsibility of all personnel (staff and contractors) employed on or in association with the Project .

Iluka maintains an electronic database system for the management of obligations, stakeholder interactions and compliance monitoring. Each compliance source and its associated obligations are periodically audited for compliance by the responsible person. Actions can be assigned to any obligation to ensure compliance is met, automatic email alerts prompt the actioners to undertake the required tasks.

Iluka also maintains an electronic database system for the storage and management of environmental monitoring data. Compliance reports can be generated from the database and compared against known performance criteria or trigger levels. Monitoring schedules and alerts can be setup to notify environmental staff of required monitoring events.

Iluka environmental staff undertake scheduled environmental inspections of work areas to identify environmental hazards, which are reported and managed via Iluka's electronic inspection management system.

In accordance with Schedule 5, Condition 6A of the Consent, non-compliances will be reported to DPE within seven (7) days of becoming aware of the non-compliance. Notification will be in writing via the Departments Major Projects Website and detail the reasons for the non-compliance and what actions have been, or will be, undertaken to address the non-compliance.

4.10.2. Environmental reporting

Annual Review

In accordance with Schedule 5, Condition 4 of the Development Consent (SSD-5285), Iluka will submit an Annual Review to DPE before 31 March each year for the previous year.

The Annual Review will specifically address the following aspects of Condition 4, which directly relate to noise:

- include a comprehensive review of the monitoring results and complaints records of the development over the previous calendar year, which includes a comparison of these results against:
    - the relevant statutory requirements, limits or performance measures/criteria;
    - the monitoring results of previous years; and
    - the relevant predictions in the EIS;
- identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;
- identify any trends in the monitoring data over the life of the development;
- identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and
- describe what measures will be implemented over the next year to improve the environmental performance of the development.

Annual EPA Return

Environment Protection Licence (20795) requires the inclusion of a monitoring and complaints summary in Iluka's Annual Return that is completed and supplied to the EPA not later than 60 days after the end of each reporting period. Noise is required to be reported to the EPA as part of the Annual Return.

Noise information included in the Annual Return includes:

- a statement of compliance;
- a monitoring and complaints summary including;
    - an analysis and interpretation of monitoring results; and
    - actions to correct identified adverse trends.

The Annual Review and Annual EPA Return and any noise monitoring results will be published on the Iluka website in accordance with Schedule 5, Condition 10 of the Development Consent (SSD-5285).

4.11. Environmental auditing

Within 1 year of the commencement of construction and every three years thereafter, a full Independent Environmental Audit will be undertaken, as required by Schedule 5, Condition 8 of NSW Development Consent (SSD-5285). The Independent Environmental Audit will include consultation with all relevant agencies and will be conducted by a suitably qualified experienced and independent team of experts whose appointment has been endorsed by the Secretary of the DPE.

The Independent Environmental Audit will:

- assess the environmental performance of the Project and assess whether it complies with the requirements of all relevant approvals;

- review the adequacy of any approved strategy, plan or program required under all relevant approvals; and
- recommend measures or actions to improve the environmental performance of the Project and/or any strategies, plans or programs required under the relevant approvals.

A copy of the Independent Environmental Audit along with the response to any recommendations contained in the audit report, will be provided to the Secretary of the DPE and made available on the Iluka website.

4.12. Other environmental reporting

In accordance with Schedule 5, Condition 3 of NSW Development Consent (SSD-5285), Iluka has developed protocols for managing and reporting the following:

- incidents;
- complaints;
- non-compliances with statutory requirements; and
- exceedances of the impact assessment criteria and/or performance criteria.

Environmental reporting requirements including timing, submission and distribution methods are summarised in Table 7.

In accordance with Schedule 5, Condition 7 of NSW Development Consent (SSD-5285), Iluka will provide regular reporting on the environment and community performance of the Project on the Iluka website community engagement hub (https://iluka.com/engage/balranald)

Table 7- Environmental reporting requirements

Report	Frequency	Distribution	Distribution Method
Incident Report	Notification immediately when becoming aware and reported via DPE Major Projects Portal.	DPE and any relevant agencies	DPE Portal/ Email
Annual Review	Annually by 31 March each year.	DPE and any relevant agencies	DPE Portal/Iluka website
Annual Return	Annually by 8 August (60 days from end of reporting period)	NSW EPA	eConnect EPA/Iluka website
Independent Environmental Audit Report	Every 3 years (Commencing within 1 year of the commencement of construction)	DPE	DPE Portal/Iluka website
Annual Rehabilitation Report & Forward Program	Annually by 1 March (60 days from end of reporting period)	NSW Resources Regulator	Regulator Portal/Rehabilitation Portal/Iluka website

4.13. Environmental management documents

The environmental management documents and electronic database systems that will be used to record and report environmental management measures for noise include:

- Environmental site inspection checklist;
- Incident alert forms;
- HSEC system (Hazard, Incident and inspection management);
- Environmental monitoring database
- Complaints register;
- Monitoring reports; and
- Annual Review

4.14. Environmental incident and emergency management

4.14.1. Environmental incidents

An incident is defined as a set of circumstances that causes or threatens to cause material harm to the environment, and/or breaches or exceeds the limits or performance measures/criteria in NSW Development Consent (SSD-5285).

Following the Group Guideline -Hazard Incident Emergency Classification (GUI1135), incidents of serious actual or potential consequence must be immediately notified to the Environment, Rehabilitation and Community Relations (ERCR) Superintendent (or equivalent environment representative) and site Operations Manager or their delegate.

The ERCR Superintendent (or equivalent environment representative) shall then:

- Determine if the incident is a 'notifiable incident' for notification to a Regulator.
- Consult with the Operations Manager or their delegate and the Environment Manager to agree on incident classification and notification requirements.
- Complete the notification within the legislated timeframes.
- Determine if the incident is a 'reportable incident' for inclusion in reports to the Regulator.

The reporting of incidents will be conducted in accordance with Schedule 5, Condition 6 of NSW Development Consent (SSD-5285) and in accordance with the protocol for industry notification of pollution incidents under Part 5.7 of the Protection of the *Environment Operations Act, 1997*.

Iluka will immediately notify the Department and any other relevant agencies immediately after the authorised person becomes aware of the incident and set out the location and nature of the incident. The DPE can be notified of incidents via the Major Projects Website https://pp.planningportal.nsw.gov.au/major-Projects and the NSW EPA can be notified by telephoning the hotline on **131 555.**

The incident report will:

- describe the date, time and nature of the exceedance/incident;
- identify the cause (or likely cause) of the exceedance/incident;
- describe what action has been taken to date; and
- describe the proposed measures to address the exceedance/incident.

4.14.2. Environmental emergencies

Iluka will maintain a Pollution Incident Response Management Plan (PIRMP) for the Project in accordance with Condition R1.1 of Environment Protection Licence 20795. The PIRMP outlines the process for responding to environmental emergencies in a timely and effective manner and adopting appropriate measures for the control and recovery from emergencies. Where appropriate, environmental emergency response procedures will be integrated with the Balranald Project Emergency Control and Response Plan.

Preparedness for emergencies by staff, personnel, contractors and service providers will be undertaken in accordance with on-site training requirements whereby personnel will be appropriately trained in the use of emergency response equipment and procedures, and will be made aware of their responsibilities should such an event occur. A list of external agencies that may be required in the event of an emergency is presented in Table 8.

On detection of an actual or potential environmental incident which may endanger personnel, property or the environment Iluka shall:

- alert the Iluka area supervisor to the location and nature of the emergency
- control and/or contain any release to the environment if safe to do so;
- evacuate all personnel to the nearest muster point if there is threat to human health and ensure all personnel are accounted for;
- ensure the emergency is responded to;
- notify the site Emergency Response team and/or Emergency Services as required;

- handover control to the site Emergency Response team and/or Emergency Services on arrival and assist as directed;
- Initiate clean up and recovery; and
- hold an emergency response debrief

Table 8- External agency contact details

Name	Contact details	Location
Police	000 03 5898 4980	Balranald
Ambulance	000	Balranald
NSW Rural Fire Service	000	Balranald
Fire and Rescue NSW	000 03 5020 1577	Balranald
Hospitals	03 5071 9800	Balranald Multi-Purpose Health Service
	03 5033 9300	Swan Hill District Hospital (emergency)
	03 5022 3333	Mildura Base Hospital (emergency)
NSW State Emergency Service	13 25 00	www.ses.nsw.gov.au
NSW Poisons Information Centre	13 11 26 (24-hour hotline)	www.poisonsinfo.nsw.gov.au
NSW Environment Protection Authority(EPA)	13 15 55	www.epa.nsw.gov.au
NSW Resources and Energy – ResourcesRegulator	1300 814 609	www.resourcesregulator.nsw.gov.au
SafeWork NSW	13 10 50	www.safework.nsw.gov.au
Balranald Shire Council	03 5020 1300	Balranald

4.15. Corrective and preventative actions

4.15.1. Incident assessment

All noise related incidents will be assessed to determine the likely cause of the incident using information such as climatic conditions where data is excluded, the nature of activities taking place and if they are Project related or non-mine noise and recent noise monitoring results.

An assessment will be conducted to determine:

- timing of elevated noise levels;
- general location of the elevated noise levels;
- climatic conditions at the time of the elevated noise levels (i.e. wind speed, wind direction and rainfall);
- potential contributing factors to the elevated noise levels (i.e. adjacent land use activities, location of operational plant and equipment); and
- whether the elevated noise levels are attributable to Project activities.

If the above assessment determines that an exceedance is due to site related noise, then the management strategies detailed in Section 4.15.3 to help prevent recurrence may be implemented in an effort to reduce noise.

If the exceedance is due to Project related noise, then it will be reported in accordance with the provisions for incident reporting outlined in Section 4.14.1.

4.15.2. Contingency plan

In the event that noise criteria detailed in Table 2 are considered to have been exceeded the following contingency plan will be implemented:

1. Iluka will apply adaptive management and incident response procedures outlined in Sections 4.15.1 and 4.15.4. (if considered an incident).

2. The exceedance will be reported in accordance with 4.14.1.

3. An appropriate course of action and contingency measures such as, but not limited to those described in Section 4.15.3 will be developed in consultation with Noise specialists and EPA as necessary.

4.15.3. Potential contingency measures

Potential contingency measures to be considered following an exceedance of noise criteria identified in Table 2 may include:

- control of noise at the source;
- control of noise transmission; or
- control of noise at the receiver.

Following implementation, the effectiveness of the additional control measures adopted will be further assessed by monitoring.

4.15.4. Adaptive management

In accordance with Schedule 5, Condition 2 of NSW Development Consent (SSD-5285), over the life of the Project Iluka will assess and manage risks to ensure that there are no exceedances of the criteria and/or performance measures outlined in Schedules 3 of NSW Development Consent (SSD-5285). Where any exceedance of these criteria and/or performance measures occurs, at the earliest opportunity Iluka will:

- take all reasonable and feasible measures to ensure that the exceedance ceases and does not recur;
- consider all reasonable and feasible options for remediation and a submit a report to the DPE describing these options and preferred remediation measures; and
- implement remediation measures as directed by the Secretary of the DPE.

4.16. EMP review and revision process

In accordance with Schedule 5, Condition 5 of Development Consent (SSD-5285), the NMP will be reviewed within 3 months of the submission of:

- the Annual Review;
- a reportable incident;
- an Independent Environmental Audit; and
- any modification to the conditions of the Consent.

Where the review leads to revisions in any document a revised document will be submitted to the Secretary of the DPE within 4 weeks of the revision occurring.

5. References

EMM Consulting 2015, *Balranald Mineral Sands Mine Noise Assessment.*

DIPNR 2004, *Guideline for the preparation of Environmental Management Plans*

NSW Environment Protection Authority 2017*, Noise Policy for Industry*

Appendix B- Record of consultation

DOC23/31848-3
1 February 2023

Iluka Resources Limited
GPO Box U1988
PERTH WA 6845

Via Major Projects Planning Portal

Attention: Brendan Isaacs

EPA Advice on Noise Management Plan

Dear Brendan

Thank you for your request to review the Noise Management Plan for the Balranald Mineral Sands Project dated January 2023.

The EPA encourages the development of such plans to ensure that proponents and licensees have determined how they will meet their statutory obligations and environmental objectives.

The EPA does not approve or endorse these plans, our role is to set environmental objectives for environmental management, not to be involved in developing strategies such as this plan to achieve those objectives. We have no further comments on this plan.

If you have any enquiries about this matter please contact Nick Van Lijf by telephoning 02 6969 0704 or by electronic mail at info@epa.nsw.gov.au.

Yours sincerely

JASON PRICE
Unit Head
Regulatory Operations Regional
NSW Environment Protection Authority

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Appendix C- Noise Risk Assessment

Aspect	Applicable Project phase	Risk definition	Management measures/controls	Residual Risk
Noise	Construction	Excessive noise leading to community complaint	• Consultation with the relevant landowners prior to and during construction. • Construction noise monitoring in the early stages of construction (where relevant). • A review of noise management measures to ensure noise levels during construction remain below the noise management levels (where required). • Complaints management, including recording, reporting and acting on noise complaints. • Maintaining all plant and equipment in good working order to ensure sound outputs are within manufacturer specifications. • Measures such as acoustic barriers or alterations to dwellings may be considered if related traffic noise effects are demonstrated by compliance monitoring. This would be undertaken in consultation with regulatory authorities and the affected resident.	Medium

Aspect	Applicable Project phase	Risk definition	Management measures/controls	Residual Risk
Noise	Operations	Excessive noise leading to community complaint	• Consultation with the relevant landowners prior to and during operations. • Compliance monitoring during operations.. • A review of noise management measures to ensure noise levels during operations remain below the noise management levels (where required). • Complaints management, including recording, reporting and acting on noise complaints. • Maintaining all plant and equipment in good working order to ensure sound outputs are within manufacturer specifications. • Measures such as acoustic barriers or alterations to dwellings may be considered if related traffic noise effects are demonstrated by compliance monitoring. This would be undertaken inconsultation with regulatory authorities and the affected resident.	Low
Noise	Construction/Operations	Excessive noise generated from earthmoving equipment resulting in exceedance of noise criteria at receiver locations.	• Maintaining all plant and equipment in good working order to ensure sound outputs are within manufacturer specifications. • Schedule more noisy works during least sensitive time of the day where relevant.	Medium
Noise	Operations	Excessive noise generated from processing plant resulting in exceedance of noise criteria at receiver locations.	• Maintaining all plant and equipment in good working order to ensure sound outputs are within manufacturer specifications. • Fans, pumps and motors located within buildings or enclosures.	Low

Aspect	Applicable Project phase	Risk definition	Management measures/controls	Residual Risk
Noise	Operations/Transport	Excessive noise generated from offsite transport resulting in exceedance of noise criteria at receiver locations.	• Trucks maintained in good working order and trailers have no loose parts that cause body rumble. • Road trains fitted with residential grade mufflers. • Road transport protocol for drivers including awareness training for noise • Staggered heavy vehicle departure times to minimise noise impacts (Where practical) • If there are any noise concerns from landholder or residents which cannot be resolved by consultation, monitoring to assess compliance with the applicable road transport noise criteria will be undertaken in consultation with regulatory authorities. • Measures such as acoustic barriers or alterations to dwellings may be considered if related traffic noise effects are demonstrated by compliance monitoring. This would be undertaken in consultation with regulatory authorities and the affected resident.	Medium

Aspect	Applicable Project phase	Risk definition	Management measures/controls	Residual Risk
Noise	Construction/Operations	Adverse meteorological conditions (i.e. noise enhancing) cause an increase of noise levels at receiver location R5 potentially leading to an exceedance of the noise criteria or complaint.	• Acquisition of R5-Karra Homestead • No persons permitted to reside at any building located at R5 location • Condition of sale prohibits 3rd party lease agreements	Low